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*Before the
Federal Communications Commission
Washington, D.C. 20554*

Federal Communications Commission
Office of Secretary

In the Matter of)
)
Advanced Television Systems)
and Their Impact upon the) MM Docket No. 87-268
Existing Television Broadcast)
Service)

PETITION FOR RECONSIDERATION

OF SPEER COMMUNICATIONS HOLDINGS I LIMITED PARTNERSHIP

Speer Communications Holdings I Limited Partnership ("Speer"), licensee of WNAB (TV), NTSC channel 58 serving Nashville, Tennessee, respectfully requests reconsideration of the Commission's Sixth Report and Order in the above-cited Docket.¹ As we shall demonstrate, the assignments that the Commission has made to existing licensees in the Nashville television market, including Speer, for facilities to provide digital television ("DTV") service would seriously disrupt over-the-air broadcast television reception — both analog and digital — for a large number of viewers in the Nashville market.

¹ Advanced Television Systems and Their Impact upon the Existing Television Broadcast Service, (Sixth Report and Order, FCC 97-115, released April 21, 1997) (hereinafter, "Sixth R & O").

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In the Sixth R & O, the Commission resolved to provide DTV allocations which replicate the service areas of existing stations to "ensure that broadcasters have the ability to reach the audiences that they now serve and that viewers have access to the stations that they can now receive over-the-air."² At the same time, the Commission tempered the replication principal by developing the DTV Table based on a minimum power level of 50 kW and a maximum power level of 1,000 kW.³ The Commission believes that stations assigned the minimum power of 50 kW, like WNAB, should, because of the maximum power limit, have the opportunity to maximize facilities through the filing of modification applications in the future.

As the attached Engineering Statement of Speer's consultant, John F. X. Browne, P.E., demonstrates, however, the assignment in the Sixth R & O of DTV channel 23 to Speer falls far short of achieving the objectives underlying the DTV table. In accordance with the Sixth R & O, Speer must operate DTV channel 23 with the same directional antenna pattern that it currently uses for NTSC channel 58.⁴ Additionally, the Commission assigned DTV channel 56 to Landmark Television of Tennessee, Inc., licensee of WTVF (TV) in Nashville.

² Sixth R & O at ¶ 30.

³ *Id.*

⁴ Sixth R & O at ¶ 32.

As demonstrated by Mr. Browne, these two assignments would result in both inadequate DTV coverage and significant interference with WNAB's analog signal, both of which would have serious deleterious effects on broadcast service to the Nashville television market.

Directional Antenna and Power Issues

Although Speer's DTV allocation for channel 23 would appear to come with a maximum power level of 50.3 kW,⁵ WNAB currently operates with a directional antenna, and the Commission's rules require its DTV signal to match the directional antenna pattern of the NTSC station.⁶ The Commission has based its digital allotment plan on a computer model that uses a terrain-sensitive factor that limits a station's actual permitted broadcast power over 360 compass radials.⁷ Thus, WNAB-DTV would either have to use a directional antenna that matched the Commission's computer model — a design that would be highly impractical — or use an omnidirectional pattern with power limited to the lowest power that would be transmitted in *any* direction by the "theoretical" antenna pattern.⁸ This

⁵ Sixth R & O, Exhibit B, page B-38.

⁶ Sixth R & O at ¶ 32.

⁷ Sixth R & O, Appendix B at pages B-1 to B-2.

⁸ See Engineering Statement at page 2.

latter course would attenuate the station's ERP by a factor of 14 dB to a total of only 2 kW, omnidirectional. At this power level, Speer would not come close to replicating its analog coverage with its DTV signal.

Furthermore, according to an analysis performed by Speer's engineering consultant, any attempt to increase WNAB-DTV's signal strength would cause interference to no fewer than 10 broadcast television stations, 7 NTSC and 3 DTV.⁹ Accordingly, the Commission's allocation plan would lock WNAB-DTV in a stranglehold from which it would be unable to serve its current audience, much less maximize its facilities.

Speer's engineering consultant and other experienced broadcast engineers have brought these issues to the attention of the Commission's Mass Media Bureau staff in recent weeks. It is vital to the success of digital television that the Commission reconsider its decision in the Sixth R & O so that these serious engineering issues may be resolved.

DTV-NTSC Interference

The Commission's allocation of DTV channel 56 to another station with a transmitter to be located 39 km from the existing WNAB NTSC transmitter is inconsistent with the separation requirements developed by the Commission for

⁹ See Engineering Statement at page 2.

use in formulating its DTV table of allotments.¹⁰ Pursuant to these requirements, no UHF DTV to NTSC allotments separated by two channels should be permitted between 24.1 km and 96.6 km from each other. This short-spacing would result in considerable destructive interference to the WNAB NTSC signal on channel 58.¹¹ Thus, the Commission should reconsider its allocation of DTV channel 56 to the Nashville market.

Substitute Allotments

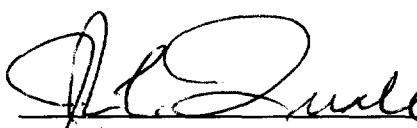
The Commission's efforts toward allocating an entirely new broadcast television system across the nation are truly extraordinary, and anomalies as in the case of the channel 23 allotment are to be expected. Although new DTV channels must be identified for WNAB and WTVF, for the reasons set forth herein, Speer is unable at this time to present a viable alternative to the allocations in the Sixth R & O without the information that the Commission has promised to release in its forthcoming Publication OET-69. Accordingly, the Commission should accord Speer and other similarly situated licensees a period of 90 days from the release of OET's report to supplement their petitions for reconsideration with proposed alternative assignments.

¹⁰ Sixth R & O at ¶ 215.

¹¹ See Engineering Statement at page 2.

For the reasons stated above, to permit the continuation of high quality broadcast television service to viewers in the Nashville market and to support the successful introduction of new digital television services, Speer respectfully requests that the Commission reconsider its decision in the Sixth R & O.

SPEER COMMUNICATIONS HOLDINGS I LIMITED PARTNERSHIP

By: 
John C. Quale
David H. Pawlik

Skadden, Arps, Slate, Meagher & Flom LLP
1440 New York Avenue, N.W.
Washington, D.C. 20005-2111
(202) 371-7000

Its Attorneys

June 13, 1997



ENGINEERING STATEMENT

of

John F.X. Browne, P.E.

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WNAB-TV

Nashville, TN

WNAB-TV operates on Channel 58 and provides NTSC service to the Nashville market from a transmitter site located south of the city. In its Sixth Report & Order (MM Docket 87-268) the Commission allotted Channel 23 to WNAB for its DTV service.

An analysis of the WNAB DTV allotment reveals many shortcomings which will seriously impact the ability of WNAB to render a viable service to its market.

Directional Antenna and ERP

WNAB presently employs a directional antenna on its Channel 58 NTSC facility. The ratio of maximum-to-minimum relative field values on this antenna is approximately 10 dB. Because of the Commission replication methodology, WNAB was assigned a new DTV pattern which has maximum-to-minimum ratio of 14 dB, 4 dB greater than the current antenna. The practical effects of this are:

- if WNAB wishes to operate omni-directionally, it cannot exceed an ERP of 2 kW (14 dB less than its allotted maximum power of 50.3 kW)

- if it uses a directional antenna exactly emulating the pattern of the one presently in use, it would have to reduce its maximum power from the allotted value to 20 kW (4 dB less)

The only way it can achieve the maximum allotted power would be to install an antenna which precisely follows the FCC generated directional pattern which does not appear to be a practical antenna design according to antenna manufacturers.

DTV Interference Received

The Commission has allotted Channel 56 to WTVF, a Nashville station, with a maximum ERP of 1,000 kW, at a site 39 km distant from WNAB-TV. The fact that these facilities are not colocated (i.e., 24 km or less), as required by the Rules for new DTV facilities, will result in considerable destructive interference to the WNAB-TV NTSC service on Channel 58 in the Nashville metropolitan area (estimated to be nearly 1,200 sq km). These facilities must be colocated or the Commission must allot a different channel to WTVF for DTV service in order to eliminate this problem.

DTV Allotment

WNAB has been allotted Channel 23 for DTV service. One of its first concerns would be the potential for maximization, i.e., a significant increase in power from 50 kW up to the maximum for the market (1,000 kW). Our analyses reveal that the WNAB-DTV allotment (at 50.3 kW) would cause predicted interference (totaling approximately 1,700 sq km) to no fewer than 10 stations (7 NTSC, 3 DTV). The bearings to these stations makes it impossible to make any practical power increases on this channel. Thus, the Channel 23 allotment must be considered to be "maximized" with the parameters listed in the table.

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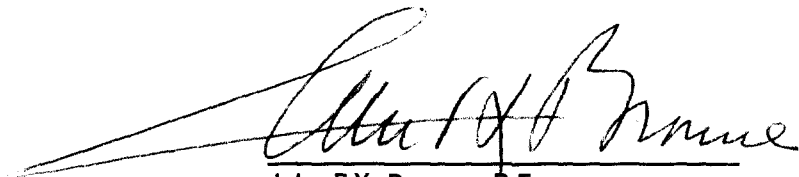
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Substitute Allotment

Without the benefit of Bulletin OET-69 to properly evaluate interference, it is difficult to identify a suitable replacement for this allotment. As soon as this document is available, WNAB-TV may request a different channel as its DTV allotment.

Certification

This statement was prepared by me or under my direction. All assertions contained in the statement are true of my own personal knowledge except where otherwise indicated and these latter assertions are believed to be true.

A handwritten signature in cursive script, appearing to read "John F.X. Browne", written over a horizontal line.

John F.X. Browne, P.E.
June 12, 1997